IN THE CLAIMS

Please amend the claims as follows:

Claims 1-6 (Canceled).

Claim 7 (Currently Amended): A method for control of a motorization system including a diesel engine, an air-intake circuit, and an exhaust circuit for exhaust gas originating from the engine, the intake circuit including an adjusting mechanism for controlling flow of air entering the engine and the exhaust circuit including a nitrogen oxides trap for storage of nitrogen oxides contained in the exhaust gases, the method performing a regeneration mode to regenerate the nitrogen oxides trap by supplying reducing exhaust gases, the method comprising:

determining an index value of air flow corresponding to an operating point of the engine during the regeneration mode;

instructing the adjusting mechanism to obtain an air flow close to the index value; and

performing a primary and secondary injection of fuel, the secondary injection being performed during an expansion phase and operative to maintain the exhaust gases in the reducing state,

wherein said primary and secondary injections are performed such that said diesel engine delivers a constant torque during a transition to said regeneration mode.

Claim 8 (Previously Presented): A method according to claim 7, wherein the motorization system is provided with an accessory that generates a variable back-pressure in the exhaust circuit, and the air-flow index value is incremented together with the exhaust back-pressure.

Claim 9 (Previously Presented): A method according to claim 8, wherein the accessory that generates a variable back-pressure is a particle filter, the air-flow index value being corrected by a factor that is a function of the operating point and of the degree of loading of the particle filter.

Claim 10 (Previously Presented): A method according to claim 9, wherein the degree of loading of the particle filter is evaluated by the exhaust-gas flow passing through it and by a pressure difference between the inlet and outlet.

Claim 11 (Previously Presented): A method according to claim 9, wherein the degree of loading of the particle filter is evaluated by measuring pressure upstream from the particle filter relative to the exhaust-gas flow.

Claim 12 (Currently Amended): A motorization system implementing a method for control of the motorization system, the motorization system comprising:

a diesel engine;

an air-intake circuit; and

an exhaust circuit for exhaust gas originating from the engine, the intake circuit including an adjusting mechanism for controlling flow of air entering the engine and the exhaust circuit including a nitrogen oxides trap for storage of nitrogen oxides contained in the exhaust gases;

the method performing a regeneration mode to regenerate the nitrogen oxides trap by supplying reducing exhaust gases, the method comprising:

determining an index value of air flow corresponding to an operating point of the engine during the regeneration mode;

instructing the adjusting mechanism to obtain an air flow close to the index value; and

performing a primary and secondary injection of fuel, the secondary injection being performed during an expansion phase and operative to maintain the exhaust gases in the reducing state,

wherein said primary and secondary injections are performed such that said diesel engine delivers a constant torque during a transition to said regeneration mode.

Claim 13 (New): A method according to claim 7, wherein during said primary injection, a quantity of fuel injected into said engine is reduced when said air flow increases, and during said secondary injection said quantity of fuel is increased so as to maintain a richness of said exhaust gas higher than 1, and to maintain said constant torque.

Claim 14 (New): A method according to claim 13, further comprising measuring said richness of said exhaust gas with a sensor positioned upstream of said nitrogen oxides trap.

Claim 15 (New): A method according to claim 9, further comprising measuring a richness of said exhaust gas with a sensor positioned upstream of said particle filter.

Claim 16 (New): A method according to claim 7, wherein, when said flow of air entering the engine remains constant, and when a quantity of fuel injected into the engine increases during said primary injection, said quantity of fuel is decreased during said secondary injection so as to maintain said constant torque.

Claim 17 (New): A method according to claim 7, wherein when a quantity of fuel injected in the engine remains constant during said primary injection and said flow of air entering the engine increases, said quantity of fuel is increased during said secondary injection so as to maintain said constant torque.